Annex D: Focused Logistics

General

Focused Logistics provides the joint force the right personnel, equipment, and supplies, in the right place, at the right time, and in the right quantity, across the full range of military operations. Ultimately this will be made possible through a real-time, web-based information system, Global Combat Support System-Army (GCSS-A). GCSS-A provides total asset visibility as part of a common relevant operational picture, effectively linking the operator and logistician across Services and support agencies. Through transformational innovations to organizations and processes, Focused Logistics will meet the joint warfighter's Combat Service Support (CSS) requirements across the spectrum of military operations.

The Focused Logistics vision calls for improved support to the warfighter through increased responsiveness, visibility and accessibility of logistics resources. The desired endstate is full spectrum supportability. Focused Logistics is dependent on a variety of imperatives such as the need for faster, more reliable, and completely integrated supply and services, and instilling confidence in the warfighter that critical supplies in the correct quantities will be where they are needed, at the time that they're needed on the battlefield. These imperatives all have the common requirement to leverage technological advantage. Technological innovations can support the intensive management of requirements and help to eliminate the need for the "iron mountain," i.e., the excess stockpiling of materiel, that has characterized logistics operations in the past.

The supply, maintenance, transportation and services systems that will enable the Army to achieve the objectives of Focused Logistics leverage refined techniques for combat support and sustainment. The goal is full spectrum support from deployment, through engagement, reconstitution, and redeployment, while simultaneously enhancing combat effectiveness and quality of life. In effect, we will achieve a reduction in time, distance, and footprint on the battlefield while increasing efficiency and effectiveness. Seventy-two percent of the resources required to achieve the goal are in the Reserve Component (RC). Accordingly, Combat Service Support elements in the RC will be equipped and modernized on a schedule consistent with their essential role in executing the Army's mission.

Army CSS will be modernized within a constrained resource environment to keep pace with the requirements of Army Transformation. The Legacy Force will rely on proven systems such as the Heavy Expanded Mobility Tactical Truck (HEMTT) and evolving systems such as the Combat Service Support Control System (CSSCS). The Interim Force will rely on proven technology that has been improved and modernized such as the Family of Medium Tactical Vehicles (FMTV) and the Line Haul Tractor (LHT) Extended Service Program (ESP). The Objective Force will operate with a

seamless, interoperable, web-based system that uses speed and precision rather than inventory mass to support the force. The continued maturation of ongoing initiatives will support that emphasis on speed and precision. In addition to those ongoing initiatives, two developmental efforts, Medical Communications for Combat Casualty Care (MC4), and the Theater Support Vessel (TSV), will bring the latest technological advances to the areas of medical communications and intra-theater lift.

Combat Service Support

Overview

The Army's logistics modernization program will support Transformation initiatives by providing more deployable, responsive, and survivable combat service support, improving the capability to project the force, and leveraging technology that allows for the forecasting of supply and maintenance requirements to reduce the need for storage and hauling capability. These efforts will optimize the potential of advancements in load configuration, containerization, and more efficient distribution of supplies and ammunition. Multi-Modal Platforms which expedite the transfer among and between all modes of transportation – air, sea, rail, and truck - are essential elements in achieving the responsiveness, deployability, agility, versatility, survivability, and sustainability characteristic of the Objective Force. These platforms will effectively remove the existing seams in the current supply chain, while simultaneously facilitating Global Distribution Based Logistics. Total Asset Visibility/In-Transit Visibility (TAV/ITV) permits rapid retrieval and transmission of supply and transportation data and nodal tracking of assets as they move through the logistics pipeline. TAV/ITV provides the ability to redistribute assets to meet needs, to divert in-transit assets when required, and to avoid buying and repairing items unnecessarily. Further efficiencies will be realized with the production of lighter, multi-purpose warfighting systems, which will reduce the in-theater logistics footprint and decrease lift requirements for combat service support.

Combat service support cannot be separated from combat operations. As an essential enabler of combat power, logistics operations must be modernized along with weapons systems and other key enablers that require supplies and services. CSS plays a vital role in military operations across the spectrum of conflict, and tailorable, responsive support will take on even greater significance as the Army refines its capabilities as a full spectrum force. Services and support that are lighter, more deployable, and more flexible are necessary to support the transformed force that will have the same characteristics. The logistics modernization strategy focuses on developing and procuring those systems that provide increased mobility, survivability, and agility to ensure that all classes of supply and all required services are available to the maneuver and supporting forces

where, when, and in the quantities needed. This includes leveraging existing and emerging technologies that support ongoing efforts to achieve predictive logistics to reduce or eliminate the in-theater stockpiling that was characteristic of logistics operations of the past. Logistics is a critical component of the Army's modernization effort. Combat Service Support, including Tactical Wheeled Vehicles (TWV), Materiel Handling Equipment (MHE), Quartermaster Systems, and Combat Health Support (CHS) systems, are among the key logistics contributors across the spectrum from major theater wars to stability and support operations. The changes put forth in *Joint Vision 2020* and the Army Vision dictate that more efficient, agile, and flexible CSS capabilities are provided for the transformed Army. The challenge is acquiring required quantities of capable equipment while keeping the cost of ownership at affordable levels. This CSS modernization strategy ensures logistical systems will continue to provide sustainment across the range of military operations by fielding technologically advanced CSS enablers and employing distribution-based centralized logistics.

CSS Modernization in Support of Transformation

Overview

In keeping with the Army Vision, maneuver sustainment is maximizing the use of new technology in transforming a sustainment system of extensive stockpiling, redundancy, and reactive support to one that seeks to optimize velocity management, mobility, versatility, responsiveness, and accessibility.

Transforming the CSS structure reduces the logistics footprint by leveraging technology and emphasizing unity of command, situational awareness, synchronization, and integration on the battlefield. Modernizing CSS equipment will allow CSS soldiers to accomplish their support missions more efficiently, ultimately requiring fewer man-hours.

Ultimately, Objective Force logistics will be a seamless, interoperable, web-based system that relies on speed and precision rather than inventory mass (i.e., distribution-based logistics system). It will be a single enterprise database that provides accurate total asset visibility and reduced customer wait time.

Legacy Force Logistics. As the Army transitions to the Objective Force, it is imperative to retain a core Legacy Force that maintains current capabilities and incorporates modernizing technologies as they become available. This ensures continued support to the Army's ability to fight and win the nation's wars. Support for the Legacy Force will come largely from recapitalized or modernized systems within the CSS structure. This modernized CSS structure will play an integral part by providing uninterrupted logistics operations that will allow the maneuver forces to continue to maintain combat overmatch without a loss in momentum on the battlefield.

One example of a selective upgrade system is the LHT, a diesel powered 6x4 system with air conditioning, a collision warning system, antilock brakes, and radial tires. It provides an economic capability to transport large tonnage over great distances. The Extended Service Program (ESP) converts the A model to the A4 and brings it up to the latest standards.

CSSCS is at the center of logistics operations from the battalion level to echelons above corps. CSSCS is the command and control (C2) system that provides commanders with timely and accurate data on the status of logistics, medical, transportation, and personnel assets to support decision making. CSSCS enables Focused Logistics throughout the Transformation process, and supports situational awareness for the decision-making process.

Other key systems that will provide support to the Legacy Force throughout the transition include:

- The **Containerized Kitchen (CK),** a battalion-level and higher kitchen capable of providing up to three hot meals a day for up to 800 soldiers. One CK replaces two Mobile Kitchen Trailers (MKT), contributing to the overall reduction in the logistics footprint on the battlefield.
- The **Heavy Expanded Mobility Tactical Truck (HEMTT)** is an 8x8 diesel-powered truck that comes in various configurations of crane, tanker, wrecker, and load-handling systems. The HEMTT provides fuel and ammunition for combat, CS, and CSS units. The tractor is used to pull the PATRIOT launcher. The wrecker is used in various units for vehicle recovery.
- The **Laundry Advanced System (LADS)** is an advanced, water recycling field laundry system capable of providing laundry support for 500 soldiers per operating day. A dry-to-dry system eliminates the need for an operator to transfer laundry from washer to extractor to dryer. This supports force structure savings by reducing operator requirements from eight to two per shift.

Interim Force Logistics. As the Interim Force bridges the gap between today's capabilities and the Objective Force, CSS will continue the recapitalization and modernization efforts already begun. Although no CSS systems are being fielded specifically for the Interim Force, there are Interim Force enablers that will be developed to meet critical logistics needs for the Interim through Objective Forces. The versatility of these enablers along with the employment of current systems and certain selective upgrades will allow continued support throughout the transition.

Objective Force Logistics. As stated earlier, CSS for the Objective Force will be a seamless, interoperable, web-based system that uses speed and precision. It will be a single enterprise database that provides accurate total asset visibility and reduced customer wait time. The Objective Logistics Force will meet warfighter-required delivery dates as well as Transformation deployment standards. The implementation of embedded prognostic and diagnostic equipment

will allow soldiers to identify maintenance problems before catastrophic failures occur. Advances in maintenance support equipment will allow defective parts to be replaced well forward in the battlespace. This capability will result in reduced non-mission capable time of mission essential systems and equipment.

In the science and technology (S&T) and research and development (R&D) arenas, efforts are ongoing to develop and introduce more durable combat, CS, and CSS systems with repair-part commonality, alternative fuel efficient systems, precision aerial delivery systems, integrated vehicular and personal water generation systems, and enhanced nutrition delivery methods. These advances will further reduce the logistics demand and, accordingly, the logistics footprint.

The Medical Reengineering Initiative (MRI) represents the transformation path for the CHS component of CSS. Deployed medical units will be more flexible, strategically deployable, and tailorable for split-based operations. This initiative also involves increasing and improving health support to soldiers on the battlefield by modernizing medical equipment.

The result is that advanced business solutions for requisitioning, inventory control, automatic cross-leveling, transporting, distributing and rerouting material have eliminated inefficiencies and redundancies. Combat commanders can now have confidence that their soldiers will get more effective and efficient medical assistance and that needed supplies will arrive in the right quantities and configurations, at the right place and at the right time on the battlefield.

Through ongoing modernization efforts, CSS systems capable of supporting the transforming and the transformed Army will be developed and fielded to all levels. The objective CSS systems will provide a more responsive and agile logistics capability to support the commander from the strategic to the tactical levels and across the spectrum of military operations.

Discussion of Equipment

Heavy Expanded Mobility Tactical Truck (HEMTT)

Description.

The HEMTT is an 8x8 diesel powered truck. It comes in cargo with light crane, cargo with medium crane, tanker, wrecker, and load handling system (LHS) versions. The HEMTT-LHS is an FY99 Warfighter Rapid Acquisition Program (WRAP) and a CSS enabler for Division XXI and the Transformation brigades. The HEMTT-LHS is funded in the HEMTT Extended Service Program (ESP). Displaced cargo HEMTTs are converted to HEMTT-LHS. This precludes procuring a new truck for a new mission.

Operational Requirement. The HEMTT provides fuel and ammunition for combat, CS, and CSS units. The tractor is used to pull the PATRIOT launcher. The wrecker is used in various units for vehicle recovery. The HEMTT-LHS is a key CSS enabler for both Division XXI and the Interim Brigade Combat Team (IBCT).

Program Status. The HEMMT is currently in production. First Unit Equipped (FUE) for HEMTT-LHS was October 2000. Procurement funding for the HEMTT program is adequate with the exception of shortages for wreckers in FY02. Additional wreckers are needed to fill shortfalls for Transformation requirements. Also, additional Research, Development, Test, and Evaluation (RDT&E) funding is required in FY05 to fund development of HEMTT II in anticipation of production beginning in FY08. HEMTT II will be the system to support the Future Combat Systems (FCS).

Advanced Aviation Forward Area Refueling System (AAFARS)

Description. AAFARS is a lightweight modular, multi-point, aviation refueling system that offers rapid combat refueling of four aircraft simultaneously. The system delivers fuel at a rate of 55 GPM per station. It is internally and externally transportable by UH1, CH-47, and UH-60 helicopters, as well as internally transportable by C-5, C-17, C-141, and C-130 aircraft.

Operational Requirement. The AAFARS is a key element of Forward Arming and Refueling Point (FARP) operations. The AAFARS replaces the Forward Area Refueling Equipment (FARE) on a one-for-two basis. The AAFARS can be rapidly inserted in any location and then quickly relocated to reduce threat action of a synchronized assault. AAFARS will enhance the ability to sustain aviation operations, maneuver into battle, and permit more time over landing zone or target.

Program Status. Production contract is scheduled for FY01. The program is funded at the minimum sustainment rate.

Containerized Kitchen (CK)

Description. The CK is housed in an 8x8x20, 3:1, expandable International Standard Organization (ISO) container that replaces the Mobile Kitchen Trailer (MKT) on a one-for-two basis. It includes seven modern burner units, a griddle, steam table, two field ovens, 60 cubic feet of refrigeration capability, a warming rack, a tray pack heater cabinet, environmental control, lighting to include blackout lighting, a hand wash sink, and an integrated 10kw tactical quiet generator.

Operational Requirement. The CK provides support at the battalion level and higher, and is capable of providing up to three hot meals a day for up to 800 personnel. The CK is mounted on a tactical trailer towed by a 5-ton FMTV vehicle.

Program Status. The CK is currently in production with fielding beginning in FY01. The CK is fully funded through FY06.

Combat Service Support Control System (CSSCS)

Description. CSSCS is a decision support system that utilizes multiple sources of logistics data to better support the warfighter and battle management process. CSSCS provides a concise picture of unit requirements and support capabilities by collecting, processing, and displaying information on key items of

supplies, services, and personnel that commanders deem crucial to the success of an operation.

Operational Requirement. CSSCS is the C2 system that provides the logistics component of the Army Battle Command System (ABCS). By rapidly collecting, storing, analyzing, and disseminating essential logistics, medical, transportation, services, and personnel information, CSSCS assists both the tactical and the CSS commander. It will be fielded to the brigade level for combat and combat support units and to the battalion level for CSS units.

Program Status. CSSCS received Milestone III approval for full-scale production in April 1997, and is currently fielded to III Corps, 2nd Armored Cavalry Regiment and XVIII Airborne to CSS battalion level. Version 4 software development, to be completed in FY01, provides enhanced capability and functionality.

Deployable Medical Systems (DEPMEDS)

Description. DEPMEDS is a program for managing the modernization, recapitalization, and maintenance of medical and nonmedical equipment to accomplish combat casualty care from the frontline to battlefield hospitalization. Through technology advancements, the logistical burden will be lessened with the elimination of procurement of specialty items, the requirement for environmentally controlled storage, and the elimination of hazardous waste from the digitized x-ray film developer. DEPMEDS provides digitized medical equipment, a smaller medical footprint, support from an intermediate staging base, and lessening of the logistics burden.

Operational Requirement. DEPMEDS supports the force health protection treatment functional area. DEPMEDS supports the Medical Reengineering Initiative (MRI) conversion plan with sustainment of existing medical equipment and replacement of obsolete, unsupportable equipment, taking full advantage of technology. Digitization of medical diagnostics and informatics, water distribution and waste water collection, oxygen production capability, and far-forward care initiatives will support the Objective Force and enhance the functionality of the Interim Force.

Program Status. The current program funding supports the recapitalization and maintenance of medical and nonmedical support equipment within the maneuver battalions, divisional medical companies, and echelon above division and echelon above corps medical treatment companies and hospitals.

Family of Medium Tactical Vehicles (FMTV)

Description. FMTV is a complete family of medium tactical trucks and companion trailers built on a common chassis and featuring over 80% commonality of parts and components between models and weight classes. It replaces all existing 2 ½-ton and 5-ton trucks in the Army inventory, including cargo, van, tractor, tanker, wrecker, dump truck models, and companion trailers.

Operational Requirement. The FMTV provides unit mobility, resupply, and transportation at all organizational levels. It operates worldwide in all weather and terrain conditions. The FMTV enhances crew survivability through the use of hard cabs, three-point seat belts, central tire inflation, and run-flat capability. It provides enhanced tactical mobility and is strategically deployable in the existing fleet of cargo aircraft. It reduces the logistics footprint by providing commonality of parts and components, reduced maintenance downtime, and lower operating and support costs than older trucks.

Program Status. The FMTV was approved for full production at Milestone IIIB in August 1995, and the FUE as the XVIII Airborne Corps at Fort Bragg, North Carolina, in January 1996. Over 11,000 vehicles had been procured as of 31 December 1999. Fielding will continue through 2022. The program has strong congressional support. FY01-02 changes included a congressional plus up of $37.3 million for the Army National Guard (ARNG) and U. S. Army Reserve (USAR).

Forward Repair System (FRS)

Description. The FRS consists of a Palletized Load System (PLS) truck with a flatrack-mounted repair module for the heavy divisions. For the IBCT, the repair module is mounted on a HEMTT-LHS. The repair module has its own generator, welding facility, crane, compressor, and tools. It permits repair forward when required. Use of the FRS eliminates the requirement for recovery vehicles to perform power pack and engine changes for combat equipment.

Operational Requirement. The FRS provides for a reduction of mechanics in Division XXI. The FRS in the IBCT reduces the number of maintenance personnel required. System mobility permits it to keep up with the combat elements of all types of combat and combat support units while eliminating the M113 vehicles previously required for this mission.

Program Status. The FRS is currently in production. FUE was October 2000. Additional funding is required to meet all requirements.

Global Combat Service Support-Army (GCSS-Army)

Description. GCSS-Army is a business and tactical automation enabler for the total Army CSS mission area. It supports the CSS functions of manning, arming, fixing, fueling, moving, and sustaining soldiers and their systems. It is the Army portion of the Global Combat Support System. GCSS-Army follows an incremental strategy combining development with fielding of capability packages.

Operational requirement. GCSS-Army supports joint, allied, and split-based operations, and provides near-real-time integrated CSS information on a single platform

featuring horizontal/vertical integration of data across CSS domains. GCSS-Army will deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical levels of operations fusing information, logistics, and transportation technologies. This directly contributes to the reduction of the logistics footprint.

Program Status. Milestone IIIA review is scheduled for 3QFY01. Development of all packages will be complete by 2QFY03 with fielding complete by 1QFY05.

Heavy Expanded Mobility Tactical Truck II (HEMTT II)

Description. The HEMTT II is the successor to the current HEMTT fleet of vehicles. It will replace the current HEMTT, Heavy Equipment Transporter System (HETS) and the PLS. It will include an LHS and tractor and wrecker variants. The 21st century truck program is the basis for the HEMTT II initiative.

Operational Requirement. The HEMTT II will provide fuel, ammunition, equipment transport, weapons platform, and wrecker capability for combat, CS, and CSS units. The HEMTT II is the heavy truck component of the Future Tactical Truck System (FTTS) currently being developed by TRADOC/CASCOM. The Mission Needs Statement (MNS) for the FTTS will be completed by December 2001 and the Operational Requirements Document (ORD) by September 2004. The HEMTT II is currently supported by an S&T objective for the 21st century truck. The objective system will reduce fuel consumption, reduce Operations and Support (O&S) costs, reduce maintenance requirements, and enhance crew survivability.

Program Status. HEMTT II production is scheduled to start in FY08. FUE is anticipated in FY11.

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)

Description. The HMMWV is a rapidly deployable, highly reliable, all-purpose, wheeled light vehicle that provides on-road and cross-country mobility. The readiness rate of the current HMMWV fleet is 94%. Due to its mobility, C-130 compatibility, and payload, the HMMWV is the prime mover for intelligence, C2, and communication systems. Also, the Up-Armored HMMWV provides improved survivability to soldiers performing peacekeeping operations by providing protection from small arms fire up to 7.62 and mines. The HMMWV is a highly reliable vehicle that can travel on all types of terrain while carrying troops, weapons, and payloads up to 5,100 lbs.

Operational Requirement. The HMMWV serves as the Army's light tactical wheeled vehicle for C2, light cargo and personnel transport, shelter carrier, ambulance, and weapons platform. It's mobility, reliability and survivability enable it to keep pace with the supported force.

Program Status. The Army has a requirement for 122,000 HMMWVs and has procured 104,000 HMMWVs. HMMWV fielding began in FY85. The average age of the HMMWV fleet is 10 years old, and the HMMWV has an economic useful life expectancy of 15+ years.

Lightweight Water Purifier (LWP)

Description. The LWP is a small, self-contained, highly transportable water purification system capable of producing 125 GPH of potable water from a freshwater source and 75 GPH from a saltwater source. The LWP will be capable of dispensing potable water at a minimum rate of 10 GPM. The LWP will also be capable of being transported in a HMMWV, sling-loaded using a UH-60 Blackhawk helicopter and airdropped by fixed-wing aircraft, to include the C-130.

Operational Requirement. The Force XXI Division requires the capability to purify water as far forward as possible. The LWP provides this capability while reducing the need for transportation of water forward. Special Operations Forces (SOF) detachments, medical detachments, and other small units will use the LWP when operating in locations that are isolated from standard water support. It may also be used in civil affairs and disaster relief operations. The LWP will sustain the daily consumption and personal hygiene water needs for populations of 70 to 225 people. The LWP will provide an important capability across the spectrum of operations, particularly in stability and support operations where potable water supplies may not be available.

Program Status. Program is scheduled for low-rate initial production in FY01, with full production to begin in FY02. The program is fully funded.

Line Haul Tractor (LHT)

Description. The LHT is a diesel-powered 6x4 system. It has air conditioning, collision warning system, antilock brakes, and radial tires. There is also a companion ESP wherein the A0 model is converted to an A4 model and is brought up to the latest standards.

Operational Requirement.
The LHT supports theater petroleum, oil, and lubricants (POL) and cargo companies. It provides an economic capability to transport large tonnage over great distances. It is also used in engineer topographic units and cargo transfer companies.

Program Status. Both the ESP and the new vehicles are currently in production. The ESP is not fully funded. RDT&E of crew protection development is not funded.

Movement Tracking System (MTS)

Description. The MTS consists of a vehicle-mounted or handheld mobile station or control station, and a satellite link. Communications is possible from the control station to the mobile station, from the mobile station to the control station, and between each. MTS permits the commander to know the location of all the distribution assets in the theater, corps, division, or brigade. MTS will also link to vehicle

diagnostics and radio frequency (RF) tags. It will be integrated with the Transportation Corps Automated Information Management System II (TCAIMS II) and GCSS-A. The driver and control stations will have maps of the area of the world in which they are operating.

Operational Requirement. MTS permits the commander to know the location of all the distribution system vehicle assets. Because control centers can send messages directly to vehicles, supplies can be quickly rerouted or vehicles can be quickly sent on new missions. The system will also be able to transmit vehicle health and cargo data.

Program Status. The program is in production with a materiel release of June 2001. FUE was November 2000 (conditional release to support Division XXI and the IBCT).

Rough Terrain Container Handler (RTCH)

Description. The RTCH is the materiel handling equipment with the capability to lift the standard 20- and 40-foot long ISO family of 8-foot wide containers weighing up to 53,000 pounds while operating on beaches, rough terrain, and unimproved surfaces. The Army's supply system relies heavily on quickly delivering ISO containers through air, sea, and rail ports of debarkation to the battlefield. This RTCH must be air deployable and provide the flexibility to handle containers and prepositioned PLS flatracks, breakbulk cargo, and heavy palletized Class V loads when equipped with a forklift attachment.

Operational Requirement. The RTCH is the key enabler and pacing item for the Transportation Cargo Transfer Company (CTC). The CTC recently underwent a reorganization to convert all Active and Reserve Component units to an Improved Cargo Handling Operations (ICHO) design, which increases the requirement for RTCHs from 8 to 16 per unit. CTSs are critical enablers to project a CONUS base force into a Theater of Operations. They are essential to meet the Army goal of closing five divisions with support within 30 days. It is projected that 90% of general cargo and 95% or all ammunition will arrive containerized in the theater. The RTCH is the single most important item of MHE to provide the theater commander the ability to receive, stage, and discharge these containers. The RTCH is air transportable in C-5/C-17 in less than one hour.

Program Status. The production contract was awarded in April 2000. Fielding begins June 2001.

Soldier Portable On-System Repair Tool (SPORT)

Description. The SPORT is a lightweight, ruggedized, portable tester employed at all levels of maintenance. It is the Army's standard on-system tester and is used by many different maintenance specialties to automatically diagnose weapon system operations, both electronic and

automotive, and identify faulty components for immediate replacement. The SPORT and its predecessor (the Contact Test Set) are in wide use throughout the Army's ground combat and CSS vehicle fleets as well as in the Army aviation fleet.

Operational Requirement. The SPORT is an essential maintenance tool in the support plans for the Army's ground vehicle and aviation fleets. It provides test and diagnostic support and maintenance automation capabilities that are critical to the readiness of Army units and their equipment. The SPORT hosts interactive electronic technical manuals and expert diagnostic systems and is used to conduct intrusive testing in support of Army weapons and electronic systems. It also provides a means to upload/download mission-critical software into weapon system on-board computer processors.

Program Status. The SPORT is in full rate production and fielding. A recent change in the basis of issue will provide SPORT to organizational level maintainers.

Theater Support Vessel (TSV)

Description. The TSV is a high-speed, 40+ knots sealift platform that will maximize commercial off-the-shelf (COTS) ferry technology currently in use in civilian markets. The TSV will support Joint Logistics Over-the-Shore (JLOTS) requirements for ship-to-shore lighterage, eventually replacing the current watercraft fleet as it reaches economic useful life span. Initial TSVs will meet the requirement for the last five LSVs (for a TAA 07 total requirement of 14 LSVs, of which only nine will be procured). The speed of the TSV will permit flexible stationing options while answering persistent, unresolved JWCA issue of late arrival of Army watercraft in Theaters.

Operational Requirement. The TSV replaces the current generation of Army watercraft to conduct Logistics Over-the-Shore (LOTS)/JLOTS and support responsiveness goals for Interim and Objective Forces.

Program Status. The ORD was approved 17 January 2000.

Transportation Corps Automated Information Management System (TCAIMS II)

Description. TCAIMS II is a joint service migration system that provides an integrated set of transportation applications to facilitate movements, management of personnel, equipment, and supplies from home station to the conflict and back. It is a source feeder system to the Joint Operation Planning and Execution System (JOPES), the Global Transportation Network (GTN), and transportation component commands for common user lift.

Operational Requirement. TCAIMS II enables rapid deployment planning and execution. The warfighter gets hands-on capability for planning and

executing unit moves assets management, and an enabler for in-transit visibility and C2.

Program Status. The system has completed the ATEC customer test for each of the Services. It is being utilized in the Joint Chiefs of Staff (JCS) Millennium Challenge exercise, and there is a prototype operational in United States Army, Europe (USAREUR).

Joint Modular Lighter System (JMLS)

Description. The JMLS will replace existing Navy lighterage and the Army Modular Causeway System (MCS), which can only operate safely in conditions up to sea state 2 condition. The system will provide a method of discharging cargo from strategic sealift ships and moving cargo to shore in the event a port is denied, degraded, or not available during sea state 3 (3.5-5 ft. waves) conditions. In addition, the system will be fully interoperable with all Services' JLOTS equipment and have maximum flexibility to be adapted to multiple uses in support of service LOTS and JLOTS operations.

Operational Requirement. Recent Department of Defense (DoD) guidance requires development of a sea state 3 JLOTS capability by FY05. JMLS is in development to meet this requirement.

Program Status. This is a Navy-led joint development program, currently in an Advanced Concept Technology Development (ACTD) with a Military Utility Assessment (MUA) planned for 2QFY01. Funds are currently programmed for the MCS, the current Army lighterage system, pending the outcome of the MUA. If the MUA is favorable, then MCS funds will be shifted to JMLS procurement.

Medical Communications for Combat Casualty Care (MC4)

System Description. The MC4 system is a theater, automated Combat Health Support (CHS) system which links commanders, health care providers, and medical support providers at all echelons with seamless, integrated medical information. It will receive, store, process, transmit, and report medical C2, medical surveillance, casualty movement/tracking, medical treatment, medical situational awareness, and medical logistics data across all levels of care. The MC4 is fully operational with standard Army systems and operates on standard Army hardware. MC4 is fully joint operations compatible and operates from a family of joint software. MC4 supports the commander with a streamlined personnel deployment system using digital medical information.

Operational Requirement. The MC4 system requirements are designed to provide the warfighter with the CHS digital tools necessary to support the Objective Force by enhancing their ability to project the force, protect the force, and sustain the force. Digital tools significantly streamline the soldier readiness process. Teleconsultation provides specialty medical information to maximize the effectiveness of deployed personnel. The MC4 system provides the real-time ability to monitor the medical status of an individual

soldier or unit. Automated medical logistics capabilities increase the effectiveness of theater medical supply by lowering stockpiles and reducing the medical footprint on the battlefield.

Program Status. MC4 is currently pre-Milestone II. The MC4 ORD has been approved by TRADOC and is currently undergoing staffing for approval by the Joint Requirements Oversight Council (JROC). The MC4 project timeline is closely tied to the Theater Medical Information Program (TMIP) whose Capstone Requirements Document and ORD are both JROC approved.

Heavy Dry Support Bridge (HDSB)

Description. The HDSB provides the Army with a compact, lightweight support bridging capability for gaps of up to 40 meters in length. The HDSB is a mechanical system capable of emplacing a 40-meter bridge with eight soldiers in 90 minutes or less. The HDSB will improve current bridge load carrying capacity up to Military Load Class (MLC) 96 for wheeled traffic and MLC 70 for tracked traffic. A bridge set consists of seven PLS pallet loads and a launcher vehicle.

Operational Requirement. This system replaces the outdated, manpower- and time-intensive Medium Girder Bridge (MGB). The HDSB provides the capability to erect a bridge in 90 minutes that will support a Heavy Equipment Transporter (HET) loaded with an M1 tank or M1 tanks themselves. Lesser vehicles are also easily supported by the HDSB. The bridge components are transportable by C-130 aircraft as well as by the Common Bridge Transporter (CBT) or by any support units equipped with PLS trucks.

Program Description. The ORD was approved in March 1993. Milestone I was achieved in December 1993, Milestone II in August 1997, and Milestone III Low-Rate Initial Production (LRIP) in April 2000. Developmental Test(DT)/Operational Test (OT) was conducted during April-December 1999. Initial Operational Test and Evaluation (IOT&E) is set for April 2002. FUE is scheduled for March 2003.

Construction Equipment (CE)

Description. To meet the operational CE requirements of the Objective Force, the following goals have been established: to provide multifunctional CE, thereby reducing the size of the fleet that must be modernized; to provide self-deployable CE whenever possible; and to procure CE with higher reliability and better logistical supportability, to reduce the operating burden on the Objective Force.

Operational Requirement. Army CE is vital to provide mobility, countermobility, survivability, and sustainment support to the Legacy, Interim, and Objective Forces. Future operations will have an

offensive/mobility focus and be conducted against an asymmetric threat in undeveloped/underdeveloped theaters with little or no host nation support/infrastructure. To support these operations, CE must be more deployable (both strategic and intra-theater), more reliable, and easier to support logistically.

Program Status. In the near-term, the Army will complete fielding of PLS dump, bituminous and concrete Engineer Mission Modules (EMMs), Hydraulic Excavators (HYEXs), All Terrain Cranes (ATECs), heavy dump trucks (20 ton), vibratory rollers, and a variety of other systems. Near-term initiatives will focus primarily on fielding the HMEE to the Interim Force, procuring a new family of loaders, new airborne scrapers and water distributors, a new heavy engineer crane, PLS EMM water distributors, and recapitalization of several CE systems, particularly key airborne and air assault CE. In the mid- through far-terms, recapitalization (rebuild and selected upgrade of CE) will be pursued to the maximum extent possible.

Assessment

CSS, to include general engineering, plays a vital role in military operations across the spectrum of conflict. Appropriate, responsive support is integral as the Army transforms into a full spectrum force. The logistics modernization strategy focuses on developing and procuring those systems that provide the key capabilities of the soldiers and weapon systems they will support, i.e., increased mobility, survivability, and agility. Improvements in survivability and mobility begin with decreasing the number of assets that must be protected and moved. Several systems, such as the FMTV, will contribute to this effort to reduce the in-theater footprint by using common parts, components, and fuels. Additionally, systems that enhance the capability of the force to sustain itself over time decrease the required transportation and warehousing assets. Improved diagnostics and test equipment, such as the SPORT, will decrease the requirement for in-theater stockage of repair parts by identifying needed components before they actually fail, and in time for them to be delivered into the theater. The capability to repair and arm combat systems in the forward area brought to the battlefield by the FRS and the AAFARS allows the maneuver forces to maintain momentum and continue offensive operations without unnecessary delays. Improved situational understanding enhances battlefield agility and enables the decision makers to redirect resources as needed to adapt to the fluid battlefield. The CSSCS and the MTS improve the commander's capability to determine the status of supplies and services and to make adjustments even during the distribution and delivery process. Strategic mobility is enhanced by improvements in MHE, specifically, the RTCH, necessary to handle the cargo and ammunition, most of which will be containerized. Engineer construction and support equipment requirements increase the performance of the CSS mission while providing line of communications and shelter for soldiers, equipment, and supplies. All of these systems are

essential to meet the deployment timelines for the transformed forces. With these ongoing efforts, Army CSS is well positioned to support the maneuver forces in all operations across the spectrum of conflict and through the Transformation process.